

WHAT IS CLAIMED IS:

1. A folding cylinder comprising: <sup>8</sup> a frame having a work-side support and a gear-side support; <sup>9</sup>  
at least one expansion segment <sup>via 18, 19</sup> for providing an effective diameter of the <sup>ABS IN 273</sup> cylinder, the expansion segment being located between the work-side support and the <sup>18, 19</sup> gear-side support and spaced apart from at least one of the work-side support and the gear-side support; and <sup>9 F.2</sup>  
an actuating device <sup>via 20 F.2</sup> for contacting the at least one expansion segment and <sup>7</sup> setting the effective diameter. <sup>F.2 83</sup>
2. The folding cylinder as recited in claim 1 wherein the at least one expansion segment is spaced-apart from both the work-side support and the gear-side support. <sup>F.2</sup>
3. The folding cylinder as recited in claim 1 wherein the expansion segment includes <sup>18, 19</sup> an outer section and a plurality of J-shaped brackets <sup>F.2; via 19</sup> connected to the outer section, a first J-bracket being spaced apart from the work-side support <sup>8</sup> and a second J-bracket being spaced apart from the gear-side support <sup>9</sup>. <sup>F.2</sup>
4. The folding cylinder as recited in claim 3 wherein an end of the J-shaped brackets located opposite the outer section interacts with eccentrics <sup>via 20</sup> on a camshaft, a rotational angle of the camshaft being adjustable. <sup>col. 4; para. 25-29</sup>
5. The folding cylinder as recited in claim 1 wherein the frame includes <sup>pin</sup> a tie support <sup>via 11</sup> between the gear-side and work-side supports, and further comprising a plurality of <sup>via 16</sup> springs on the tie support for forcing the expansion segment radially outwardly.
6. The folding cylinder as recited in claim 1 further comprising a foam piece in a space between the expansion segment and the at least one of the gear-side and work

side supports.

7. The folding cylinder as recited in claim 2 further comprising foam pieces between the expansion segment and the work-side support and between the expansion segment and the gear side support.

8. The folding cylinder as recited in claim 3 further comprising a foam piece attached to a side of the first J-bracket.

9. The folding cylinder as recited in claim 8 wherein the foam piece covers the side in its entirety.

10. The folding cylinder as recited in claim 6 wherein the foam piece includes a friction-reducing coating.

11. The folding cylinder as recited in claim 1 wherein the cylinder is a pin cylinder of a cross-folder.

12. A method of manufacturing a folding cylinder comprising the steps of:  
providing an expansion segment between a folding cylinder frame having a work and gear side; and  
spacing the expansion segment from the frame.

13. The method as recited in claim 12 further comprising applying foam to the expansion segment.